REMARKS

The Office Action fails to establish that claims 1, 2 and 4-12 are unpatentable under 35 USC §103(a) over US patent number 6,201,443 to Tanji in view of US patent number 5,889,432 to Ho.

Applicant respectfully contends that the Office Action fails to establish a *prima facie* case of obviousness based on the combination of references of Tanji and Ho under 35 U.S.C. §103. To establish a *prima facie* case of obviousness based on a combination of references, three basic criteria must be met, as is set forth in M.P.E.P., §2143:

1) The prior art references must teach or suggest all of the claim limitations;

2) There must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; and

3) There must be a reasonable expectation of success.

The combination of Tanji and Ho, however, fails to show all of the limitations recited in Applicant's Claim 1.

Applicant's Claim 1 sets forth at least an inductive amplifier comprising an inductive amplifier circuit that includes an input voltage, an output voltage, and an intermediate output node, where the output voltage is related to the input voltage by a gain. The inductive amplifier further includes a feed-forward boost circuit coupled to the intermediate output node of the inductive amplifier circuit. The feed-forward boost circuit receives the input voltage and increases the gain at higher frequencies. These limitations are not taught by the Tanji-Ho combination.

In particular, the Office Action cites amplifier circuit 20 of Tanji as disclosing input voltages V_{INP} and V_{INN} and output voltages V_{OUTP} and V_{OUTN}, where the input voltage is amplified by a gain factor. Thus, the Office Action necessarily requires that transistors M1 and M2 form the amplifier circuit, since through the action of M1 and M2, a gain factor is provided that relates the output voltage to the input voltage.

The Office Action, however, attempts to cite transistors M1 and M2 as also "form[ing] part of a feed forward boost circuit", presumably in regard to Applicant's second element of Claim 1. Thus, the Office Action requires that transistors M1 and M2 of Tanji form both an amplifier circuit and a feed forward boost circuit. However, as required by claim 1, either transistors M1 and M2 form an amplifier circuit, or they form a feed forward boost circuit, but they cannot form both an amplifier circuit and a feed forward boost circuit as the Office Action suggests.

In contrast, Applicant's claim 1 sets forth "an inductive amplifier circuit that includes an input voltage, an output voltage, and an intermediate output node, wherein the output voltage is related to the input voltage by a gain", where in an example embodiment (FIG. 3 of the specification), transistors N1 and N2 form the gain stage of the inductive amplifier circuit that relates the differential output voltage, VO_P and VO_N, to the differential input voltage, VI_N and VI_P.

Claim 1 additionally sets forth "a feed-forward boost circuit coupled to the intermediate output node of the inductive amplifier circuit, the feed-forward boost circuit receiving the input voltage and increasing the gain at higher frequencies." In an example embodiment, transistors N3 and N4 also receive the differential input voltage, VI_N and VI_P, to provide adjustments to the gain generated by the first element of Claim 1, i.e., the inductive amplifier circuit, at higher frequencies.

Thus, it can be seen that the claim 1 sets forth a combination of an inductive amplifier circuit and a feed forward boost circuit that interact with each other to adjust the gain of the combined circuit in response to the frequency of the input signal being amplified. Tanji, on the other hand, only discloses a single circuit (as discussed above) and therefore fails to teach, or fairly suggest, such a structure and its associated effects.

The Office Action further cites Ho as teaching "the use of inductors in the power supply side of the amplifier arrangement", so as to "block ac to and from the power supply voltage". The Office Action, however, fails to combine Ho with Tanji in a manner that remedies Tanji's deficiency. Specifically, Ho fails to remedy Tanji's lack of teaching both an inductive amplifier circuit and a feed forward boost circuit as set forth in claim 1.

Thus, although the Office Action suggests that the Tanji/Ho combination has some effect on blocking ac to and from the power supply through the use of inductors, this structure and the suggested effects are unrelated to claim 1. Applicant respectfully submits, therefore, that criteria 1) for an establishment of a *prima facie* case of obviousness is lacking. Since criteria 2) and 3) are conjunctive to criteria 1), a showing of the lack of criteria 1) is enough to rebut the Office Action's rejection.

Furthermore, a method implemented by the claim 8 structure patentably distinguishes over the combination of Tanji and Ho. In particular, a method of boosting a gain of an inductive amplifier circuit comprises generating at least part of a primary current in the inductive amplifier circuit in response to a differential input signal of a pair of differential input signals, generating at least part of a feed-forward current in response to the differential input signal, and combining the at least part of the primary current with the at least part of the feed-forward current, whereby the at least part of the feed-forward current increases at least in part the gain of the inductive amplifier circuit.

Thus, Applicant's method sets forth "combining at least part of the primary current", e.g., I_1, " with the at least part of the feed-forward current", e.g., I_2, to increase the gain of the inductive amplifier circuit. In an exemplary embodiment, current flowing into nodes O_{P1} and O_{N1} is equal to a scaled combination of current sources I_1 and I_2, since the sum of the current flowing into nodes O_{P1} and O_{N1} must equal the sum of the current flowing out of nodes O_{P1} and O_{N1}, respectively.

In contrast, it can be seen by inspection of FIG. 2 of Tanji, that the only current generated is that of current source 17, which is shared by transistor pairs M1M2 and M3M4. Thus, the current flowing through transistor pairs M1M2 and M3M4 is a scaled combination of only one current source, current source 17, as opposed to the use of two current sources as set forth in claim 8.

For at least the reasons stated above, independent Claims 1 and 8 patentably distinguish over the combination of Tanji and Ho and are in condition for allowance. Dependent Claims 2, 4-7, and 9-12, which are dependent from independent Claims 1 and 8, respectively, were also rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Tanji and Ho. While Applicant does not acquiesce to any particular rejections of these dependent claims, it is believed that these rejections are now moot in view of the remarks made in connection with independent Claims 1 and 8. These dependent claims include all of the limitations of the base claim and any intervening claims, and recite additional features which further distinguish these claims from the cited references.

The Office Action fails to establish that claim 3 is unpatentable under 35 USC §103(a) over Tanji in view of Ho as applied to claims 1, 2 and 4-12, and further in view of Applicant's Admitted Prior Art (AAPA) as represented by Figure 1.

In particular, Claim 3 incorporates all of the limitations as set forth in Claim 1. Accordingly, the combination of Tanji and Ho also fails to establish a *prima facie* case of obviousness with respect to Claim 3 for at least the same reasons.

The Office Action further suggests that AAPA discloses "capacitors connected across the first and second intermediate nodes." Assuming *arguendo* that the Office Action is correct, such a disclosure does not remedy the deficiency of the Tanji and Ho combination and thus the combination of Tanji, Ho and the

AAPA similarly fails to establish a *prima facie* case of obviousness with respect to Claim 3. The Applicant respectfully submits, therefore, that Claim 3 patentably distinguishes over the combination of Tanji, Ho and the AAPA and is in condition for allowance.

CONCLUSION

Reconsideration and a notice of allowance are respectfully requested in view of the remarks presented above. If the Examiner has any questions or concerns, a telephone call to the undersigned is invited.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Commissioner for Patent, P.O. Box 1450, Alexandria, VA 22313-1450, on June 25, 2004.

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